MRMPO
Mid-Region Metropolitan Planning Organization

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Mid-Region Council of Governments
809 Copper Avenue NW
Albuquerque, New Mexico 87102
(505) 247-1750-tel. (505) 247-1753-fax
www.mrcog-nm.gov

Date July 7, 2016

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Re: **ET Docket No. 13-49**, Comments of MRMPO to Refresh the Record on Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band

Dear Ms. Dortch:

The Mid Region Metropolitan Planning Organization (MRMPO) appreciates the opportunity to respond to the Federal Communications Commission's (FCC) Public Notice dated June 1, 2016 (FCC 16-68)(the "PN") to update and refresh the record on the use of U-NII devices in and near the 5.9 GHz band designated for Dedicated Short Range Communications (DSRC). (Organization) urges the Commission to preserve the 5.9 GHz band and its channelization as designed for DSRC safety of life benefits and mobility applications that have been in development of over a decade. Any sharing protocol must work around currently deployed and planned deployments of DSRC applications and thorough testing must be done to determine that the protocol is safe before any sharing implementation.

We would emphasize that any proposal that calls for rechannelization of the 5.9 GHz band will set back the future of traffic safety several years and cost hundreds of millions of dollars in wasted research, development and investment.

MRMPO, as the designated metropolitan planning organization, representing the member agencies within the MRMPO region are responsible for the execution and coordination of the transportation planning and programming process in close coordination with our partners the New Mexico Department of Transportation and the Federal Highway Administration, Santa Fe Division. As part of these responsibilities, our Metropolitan Transportation Board (MTB) has adopted several goals as part of our MTP, including safety, congestion reduction, system reliability, freight movement and economic vitality, among others. We maintain the AMPA Regional ITS Architecture for all of our member agencies, and our planning efforts strive to achieve smooth integration of cutting edge ITS technologies which is reliant on solid and dedicated communications capabilities. The exclusive use of the 5.9 ghz for DSRC communications in support of V2V, V2I, and V2P is critical to achieving these goals.

1. **DSRC is an essential and unique technology for safety of life Vehicle-to-Vehicle (V2V), Vehicle-to-Infrastructure (V2I) and Vehicle-to-Pedestrian (V2P) communications.**

V2V, V2I and now V2P have been developed on the assurance of the FCC's designated channel plan. While it is true that one channel, channel 172, is currently designated for V2V Basic Safety Message (BSM) communications, safety critical communications will occur throughout the 5.9 GHz DSRC band.

Every one of the other channels, except the essential control channel and 5 MHz separation, carry safety of life applications. These include, without limitation, the following:

a. Vehicle-to-vehicle collision warnings and controls
b. Vulnerable road user (*e.g.*, pedestrian) safety
c. Cooperative adaptive cruise control and platooning
d. Red light violation warning
e. Curve speed warning
f. Emergency vehicle alert
g. Signal preemption
h. Cooperative merging[1]

It is important for the FCC to consider that the channels were created to support the performance, reliability and low latency requirements of these applications as well as support future development. Compressing what was intended for all seven channels into the upper 30 MHz also would dramatically restrict the functionality of DSRC applications for V2V, V2I and V2P.

Moreover, the current channelization separates the lower power BSM function in Channel 172 from the higher power public safety applications in Channel 184. Placing these functions in close proximity, as the rechannelization plan proposed, would degrade and endanger the BSM.

Even without considering what may be an unacceptable loss in DSRC uses, rechannelization would require a substantial amount of DSRC system re-design and retesting to ensure that the new channelization plan could successfully support any DSRC applications. Re-design and retesting would mean delay. Rechannelization would throw out existing research, negatively impact current and planned deployments, and delay DSRC's life-saving benefits, costing lives. The FCC must not issue a new channel plan for 5.9 GHz to simply obtain more Wi-Fi spectrum. Everyone supports the concept of more Wi-Fi spectrum, but not at the cost of lives.

In short, rechannelization of the 5.9 GHz DSRC spectrum will essentially damage or severely delay the future of much safer traffic and the promise of V2V, V2I and V2P.

2. Any spectrum sharing must be proven to be completely and reliably safe without interference to the safety of life functions of DSRC. The FCC should adopt a reasonable testing schedule that emphasizes safety, not speed.

We support the sharing of the 5.9 GHz band on a not-to-interfere basis and with priority to DSRC, as long as it can be positively proven that any unlicensed sharing of the band will not

[1] *See,* U.S. Department of Transportation, Connected Vehicle Applications: Safety (FHWA-JPO-16-241), http://ntl.bts.gov/lib/56000/56200/56237/FHWA-JPO-16-241.pdf, (2016)(describes 14 V2V applications, 14 different V2I applications and a separate V2P application for DSRC).